vacuum) must be always constant (c– value) and obviously it does not depend on the inertia.

Consequently, the Doppler effect for the radiating source, moving TO Earth is due to the really decreased λ (in the space of the direction of movement) during the light radiation. But if it is the Earth that moves to such radiating source, the register ONLY records more frequently the periodicity (corresponding to the real λ) of the light vibrations (due to their increased relative velocity, equal to the vectorial sum of the velocities), producing phenomenologically the same effect of the λ change. So the Earth movement clearly does influences the measurements due to the corresponding movements of the registrating devices during the light propagation in the space. If the light source moves to the mirror moving in the direction of the Earth movement, the length of the light pathway (until mirror) increases (plus the pathway, running by the mirror with Earth velocity during the light propagation) and oppositely /5/. As a consequence, all (!) more recent and more sensitive experiments, using Doppler– effect with the Earth situated source /Refs.6/, and influenced ALSO by Earth movement, are simply utopic apriori, because the additional real increase (or decrease) of the λ, due to additional Earth movement of source is ALWAYS exactly compensated by the same movement of the Earth register /in measuring with the corresponding seeming decrease (increase)/ and they do not confirm the foundation of the Einstein theory /5/.

7.3. The basic Michelson experiments of Einstein Mechanics are erroneous. The gravest experimenatl error in science history.

So now we are ready to realize the most grave, experimental error in the Science History, that yet costs, to the World physics, one century of the basic impasses: the very famous Albert Michelson Nobel experiment /5/.

7.3.1. Time path difference at ONE point O→O' of observation.

Let us, firstly, calculate, at the POINT O (becoming the point O' at the end of the light movement due to the Earth movement: O → O') of the light beam division in two parts (to see Fig.1A with footnotes), the time difference of the parallel ($\parallel$) and perpendicular ($\perp$) (to the Earth movement) beam part paths.

$M_2O^2 = c^2(t/2)^2 = P'M_2^2 + P'O^2 = l_o^2 + V_e(t_\perp/2)^2$, where $t_\perp$– is time for path OM_2O'. Hence : $t_\perp = 2l_o/c \cdot \sqrt{1-\beta^2} \simeq 2l_o/c \cdot (1 - \beta^2/2)$, (1)

neglecting the terms of higher orders of β– very small value.

$OM_1' = ct_{\parallel\rightarrow} = P'O + P'M_1' = l_o + V_e t_{\parallel\rightarrow}$, hence $t_{\parallel\rightarrow} \simeq l_o(1 + \beta + \beta^2)/c$,

$M_1'O' = ct_{\parallel\leftarrow} = M_1'P' - P'O' = l_o - V_e t_{\parallel\leftarrow}$, hence $t_{\parallel\leftarrow} \simeq l_o(1 - \beta + \beta^2)/c$

where $t_{\parallel\rightarrow}$ and $t_{\parallel\leftarrow}$ are the time for the $\parallel$ pathway to the right and left (Fig.1A).

So, $t_\parallel$ (total) $= t_{\parallel\rightarrow} + t_{\parallel\leftarrow} = (2l_o/c)(1 + \beta^2)$ and

Δt (at O' observation point!) $= t_\parallel - t_\perp = l_o\beta^2/c$ (time difference),

coinciding with Michelson and Morley result /7,8/, although they maked more simplified geometric calculations but yet considering (with James Maxwell) "that light waves are propagated in the free ether in any direction and always with the same velocity with

vacuum) must be always constant (c- value) and obviously it does not depend on the inertia.

Consequently, the Doppler effect for the radiating source, moving TO Earth is due to the really decreased λ (in the space of the direction of movement) during the light radiation. But if it is the Earth that moves to such radiating source, the register ONLY records more frequently the periodicity (corresponding to the real λ) of the light vibrations (due to their increased relative velocity, equal to the vectorial sum of the velocities), producing phenomenologically the same effect of the λ change. So the Earth movement clearly does influences the measurements due to the corresponding movements of the registrating devices during the light propagation in the space. If the light source moves to the mirror moving in the direction of the Earth movement, the length of the light pathway (until mirror) increases (plus the pathway, running by the mirror with Earth velocity during the light propagation) and oppositely /5/. As a consequence, all (!) more recent and more sensitive experiments, using Doppler- effect with the Earth situated source /Refs.6/, and influenced ALSO by Earth movement, are simply utopic apriori, because the additional real increase (or decrease) of the λ, due to additional Earth movement of source is ALWAYS exactly compensated by the same movement of the Earth register /in measuring with the corresponding seeming decrease (increase)/ and they do not confirm the foundation of the Einstein theory /5/.

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Hence : $t_\perp = 2l_o/c \cdot \sqrt{1-\beta^2} \simeq 2l_o/c \cdot (1 - \beta^2/2)$, (1)

neglecting the terms of higher orders of β– very small value.

$OM_1' = ct_{\parallel\to} = P'O + P'M_1' = l_o + V_e t_{\parallel\to}$, hence $t_{\parallel\to} \simeq l_o(1 + \beta + \beta^2)/c$;

$M_1'O' = ct_{\parallel\leftarrow} = M_1'P' - P'O' = l_o - V_e t_{\parallel\leftarrow}$, hence $t_{\parallel\leftarrow} \simeq l_o/c \cdot (1 - \beta + \beta^2)$

where $t_{\parallel\to}$ and $t_{\parallel\leftarrow}$ are the time for the $\parallel$ pathway to the right and left (Fig.1A).

So, $t_\parallel$ (total) $= t_{\parallel\to} + t_{\parallel\leftarrow} = 2l_o/c \cdot (1 + \beta^2/2)$ and

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coinciding with Michelson and Morley result /7,8/, although they maked more simplified geometric calculations but yet considering (with James Maxwell) "that light waves are propagated in the free ether in any direction and always with the same velocity with

respect of the ether" and tri d to find the "ether drift" of changing of the <u>relative</u> velocity between the light and Earth.

Hence the path difference $\Delta l = l_o \cdot \beta^2 = 3200Å$ (at $\beta = 10^{-4}$ and $l_o = 32m$– Dayton Miller conditions– /9/) and $\Delta l = 32\mu$(at $\beta = 10^{-3}$) at point O'.

7.3.2. Tim path difference at <u>ANY</u> point of observation (Fig.1A configuration).

But one can see from Fig.1A, that the time difference between II and ⊥ beam paths depends on the observation point of their meeting, that, however, never was really considered during already the century of the World success and very intensive discussions.

Let us calculate the above time difference at some observation point E (at the distance value x from O' with order of value of OO', it means $l_o\beta$ /where $OO' = 2V_e t_\perp$/).

7.3.2.1. ⊥ path OM_2'E.

$$OM_2' = \sqrt{(M_2'P")^2 + (OP")^2} = \sqrt{l_o^2 + (OP' + P'P")^2} = \sqrt{l_o^2 + (OP' + x/2)^2}$$

$$OM'_2 = l_o \cdot \sqrt{1 + (OP' + x/2)^2/l_o^2} \simeq l_o + (OP')^2/2l_o + OP'\cdot x/2l_o + x^2/8l_o, \text{ where}$$

$OE - OO' = x$, hence $OE/2 - OO'/2 = OP" - OP' = P'P" = x/2$.

Analogically, $OM_2 = \sqrt{l_o + (OP')^2} \simeq l_o + (OP')^2/2l_o$.

Hence $OM_2' = OM_2 + OP'\cdot x/2l_o + x^2/8l_o$, so in taking the total ⊥ path ($OM_2'E$) and dividing by c, one has: $t_\perp'$(path $OM_2'E) = t_\perp + OP'\cdot x/l_oc + x^2/4l_oc$.

Therefore, using equation (1) and introducing V_e in 2nd term:

$$t'_\perp = 2l_o(1 + \beta^2/2)/c + (OP'/V_e)\cdot(V_e/c)\cdot(x/l_o) + x^2/4l_oc.$$

Hence with relation $OP'/V_e = t_\perp/2$ and, again, using equation (1), we have:

$$t'_\perp = 2l_o(1 + \beta^2/2)/c + \beta\cdot x\cdot(1 + \beta^2/2)/c + x^2/4l_oc.$$

7.3.3.2. The II path OM_1'E.

$$OM_1'(t'_{II\rightarrow}) = ct'_{II\rightarrow} = OM_1 + MM_1' = l_o + V_e\cdot t'_{II\rightarrow},$$

hence analogically: $t'_{II\rightarrow} = l_o/c - V_e \simeq l_o(1 + \beta + \beta^2)$

and equally: $M_1'E\ (t_{II\leftarrow}) = ct'_{II\leftarrow} = M_1'O - OO' - x = l_o + V_e\cdot t'_{II\rightarrow} - 2l_o\beta - x$ /using equation (1), we have: $OO' \simeq 2l_o\beta$ /. With the above equation for $t'_{II\rightarrow}$, we get: $M_1'E = l_o\cdot(1 - \beta + \beta^2) - x$ and $(t'_{II\leftarrow}) = l_o\cdot(1 - \beta + \beta^2)/c - x/c$.

So $t'_{II}(\text{total}) = t'_{II\rightarrow} + t'_{II\leftarrow} = 2l_o(1 + \beta^2)/c - x/c$.

7.3.2.3. Equality point .

The t'_{II} (total) decreases with x and the $t'_\perp$ increases with x. Let us find the x at $\Delta(t'_{II} - t'_\perp) = 0$ (Δ– difference). One has the second order equation relatively x:

$$2l_o(1 + \beta^2)/c - x/c - 2l_o(1 + \beta^2/2)/c - \beta x(1 + \beta^2/2)/c - x^2/4l_oc = 0 \quad (2)$$

As consequence: $x^2 + 4l_ox + 4l_o\beta x - 4l_o\beta^2 = 0$ and one obtains $x \simeq l_o\beta^2$ (3) (In neglecting the terms of the order, higher than 2) making the root approximation (Tailor series) with 3 terms.

7.3.3. Time path difference at ANY observation point after 90° rotation (Fig.1B configuration).

7.3.3.1. II path OM_2'NE.

From similar triangles $\Delta PM_2'N$ and $\Delta NEE'$: $EE'/NE = M_2'P/PN$

and $(V_et_{II\uparrow} + V_et_{II\downarrow})/(y - 2PN) = (l_o - V_et_{II\uparrow})/PN$,

respect of the ether" and tried to find the "ether drift" of changing of the <u>relative</u> velocity between the light and Earth.

Hence the path difference $\Delta l = l_o \cdot \beta^2 = 3200Å$ (at $\beta = 10^{-4}$ and $l_o = 32m$– Dayton. Miller conditions– /9/) and $\Delta l = 32\mu$(at $\beta = 10^{-3}$) at point O'.

7.3.2. Time path difference at <u>ANY</u> point of observation (Fig.1A configuration).

But one can see from Fig.1A, that the time difference between II and $\perp$ beam paths depends on the observation point of their meeting, that, however, never was really considered during already the century of the World success and very intensive discussions.

Let us calculate the above time difference at some observation point E (at the distance value x from O' with order of value of OO' value, it means $l_o\beta/2V_e \cdot t_\perp$/).

7.3.2.1. $\perp$ path OM_2'E.

$OM_2 = \surd(M_2'P")^2 + (OP")^2 = \surd l_o^2 + (OP' + P'P")^2 = \surd l_o^2 + (OP' + x/2)^2$

$OM_2' = \surd 1 + (OP' + x/2)^2/l_o^2 \simeq l_o + (OP')^2/2l_o + OP' \cdot x/2l_o + x^2/8l_o$, where

OE – OO' = x , hence OE/2 – OO'/2 = OP" – OP' = P'P" = x/2.

Analogically, $OM_2 = \surd l_o + (OP')^2 \simeq l_o + (OP')^2/2l_o$.

Hence $OM_2' = OM_2 + OP' \cdot x/2l_o + x^2/8l_o$, so in taking the total $\perp$ path (OM_2E) and dividing by c, one has: $t_\perp'$(path $OM_2'E) = t_\perp + OP' \cdot x/l_o c + x^2/4l_o c$.

Therefore, using equation (1) and introducing V_e in 2nd term:

$$t'_\perp = 2l_o(1 + \beta^2/2)/c + (OP'/V_e) \cdot (V_e/c) \cdot (x/l_o) + x^2/4l_o c.$$

Hence with relation $OP'/V_e = t_\perp/2$ and, again, using equation (1), we have:

$$t'_\perp = 2l_o(1 + \beta^2/2) + \beta \cdot x \cdot (1 + \beta^2/2)/c + x^2/4l_o c.$$

7.3.3.2. The II path OM_1'E.

$OM_1'(t'_{\mathrm{II}\rightarrow}) = ct'_{\mathrm{II}\rightarrow} = OM_1 + MM_1' = l_o + V_e \cdot t'_{\mathrm{II}\rightarrow}$,

hence analogically: $t'_{\mathrm{II}\rightarrow} = l_o/c - V_e = l_o(1 + \beta + \beta^2)$

and equally: $M_1'E\ (t_{\mathrm{II}\leftarrow}) = ct'_{\mathrm{II}\leftarrow} = M_1'P' - P'O' - x = l_o - V_e t'_{\mathrm{II}\leftarrow} - x$,

afterwards: $t'_{\mathrm{II}\leftarrow} = l_o - x/c + V_e \simeq l_o(1 - \beta + \beta^2) - x/c \cdot (1 - \beta + \beta^2)$ (in neglecting the terms of the order, higher than 2).t'_{II}(total) = $t'_{\mathrm{II}\rightarrow} + t'_{\mathrm{II}\leftarrow}$.

7.3.2.3. So the t'_{II} (total) dicreases with x and the $t'_\perp$ increases with x. Let us find the x at $\Delta(t_\perp - t_{\mathrm{II}}) = 0$ (Δ– difference). One has the second order equation relatively x /equation (2)/:

$$2l_o/c \cdot (1 + \beta^2)/c - x/c \cdot (1 - \beta + \beta^2) - 2l_o(1 + \beta^2/2) - \beta x/c \cdot (1 + \beta^2/2) - x^2/4l_o c = 0$$

Hence: $x^2 + 4l_o x + 4l_o\beta^2 x - 4l_o\beta^2 = 0$ or even $x^2 + 4l_o x - 4l_o\beta^2 = 0$.

From <u>both</u> equations, one obtains,naturally, the same result in taking the terms until β^2 at the root approximation (Taylor series): <u>$x \simeq l_o\beta^2$</u> (3).

7.3.3. Time path difference at ANY <u>observation point</u> after 90° rotation (Fig.1B configuration).

7.3.3.1. II path OM_2'NS.

From similar triangles ΔPM_2N and $\Delta NEE'$: $EE/NE = M_2P/PN$

and $V_e t_{\mathrm{II}\uparrow} + V_e t_{\mathrm{II}\downarrow}/y - 2PN = l_o - V_e t_{\mathrm{II}\uparrow}/PN$,

where the $t_{\parallel\uparrow}$ and $t_{\parallel\downarrow}$ – the times for path OM_2' and $M_2'NE'$ correspondingly. After the simple transformations, we get: $PN = y(l_o - V_e t_{\parallel\uparrow})/(2l_o + V_e t_{\parallel\downarrow} - V_e t_{\parallel\uparrow})$.

After th approximation (series Taylor) of the above corrected inverse function with the consecutive multiplication (in neglecting /at the end/ the terms of higher /than β^2/ orders), one get: $PN \simeq y/2$ (4), where the y must be already proportional to $l_o\beta^2$– §7.3.2.3.). Let find NE' from the similar triangles $\Delta OM_2'N$ and $\Delta NEE'$:

$NE' = NM_2' \cdot EE'/M_2'P = OM_2' \cdot (V_e t_{\parallel\uparrow} + V_e t_{\parallel\downarrow})/(l_o - V_e t_{\parallel\uparrow})$ (where $NM_2' \doteq OM_2'$).

Analogically to the transformations of PN /in obtaining the equation (4)/, we get:

$$NE' = (OM_2'/l_o) \cdot (V_e t_{\parallel\uparrow} + V_e t_{\parallel\downarrow} + V_e^2 t_{\parallel\uparrow}^2/l_o + V_e^2 t_{\parallel\uparrow} t_{\parallel\downarrow}/l_o) \qquad (5).$$

From right-angled triangle ΔOM_2P, one has:

$$OM_2' = \sqrt{(OP)^2 + (M_2'P)^2} = \sqrt{(PN)^2 + (l_o - V_e t_{\parallel\uparrow})^2}.$$

With simple calculations (analogically to §7.3.2.1.) in dividing by l_o, approximating the root (Taylor series: taking firstly <u>until the term of second order</u>) and in neglecting (at the end) the terms of higher (than β^2) orders, we obtain (after deviding by c):

$$t_{\parallel\uparrow}(OM_2') = (l_o/c) \cdot (1 - V_e t_{\parallel\uparrow}/l_o + (PN)^2/2l_o^2).$$

Using equation (4), one has: $t_{\parallel\uparrow} = l_o/c - V_e t_{\parallel\uparrow}/c + y^2/8l_o c$ (6),

hence one can find $t_{\parallel\uparrow}$: $t_{\parallel\uparrow} = (8l_o + y^2)/(8l_o c + 8l_o V_e)$,

and then after approximation (series Taylor) of the above corrected (division and multiplication by $8l_o c$) inverse function with consecutive multiplication (neglecting the higher terms) (analogically to the, justly, above), we get:

$$t_{\parallel\uparrow} = l_o/c - l_o\beta/c + l_o\beta^2/c + y^2/8l_o c \qquad (7)$$

From equation (5), one has the time for NE' light path:

$$t_{NE'\downarrow} = (t_{\parallel\uparrow}/l_o)(V_e t_{\parallel\uparrow} + V_e t_{\parallel\downarrow} + V_e^2 t_{\parallel\uparrow}^2/l_o + V_e^2 t_{\parallel\uparrow} t_{\parallel\downarrow}/l_o).$$

This equation permits to calculate the time for $M_2'NE'$ path: $/t_{\parallel\downarrow}(M_2'NE') = t_{\parallel\uparrow} + t_{NE'}/$, where analogically to obtaining the equation (7) from (6), one gets the expression for $t_{\parallel\downarrow}$ with approximation of inverse function, multiplications and simple transformations:

$$t_{\parallel\downarrow} = t_{\parallel\uparrow} + 2t_{\parallel\uparrow}^2 V_e/l_o + 3t_{\parallel\uparrow}^3 V_e^2/l_o^2.$$

So $t_{\parallel}(\text{total}) = t_{\parallel\uparrow} + t_{\parallel\downarrow} = 2t_{\parallel\uparrow} + 2t_{\parallel\uparrow}^2 V_e/l_o + 3t_{\parallel\uparrow}^3 V_e^2/l_o^2$ and using the equation (7), taking even one term from $t_{\parallel\uparrow}^3$, making the simple transformations and neglecting the terms of higher orders, we get: $t_{\parallel}(\text{total}) \simeq 2l_o/c + y^2/4l_o c$ (8).

7.3.3.2. $\perp$ path OM_1E'.

With help of the right-angled triangles ΔOM_1R and $\Delta HM_1E'$, one has:

$OM_1^2 = c^2 t_{\perp\rightarrow}^2(OM_1) = (RM_1)^2 + OR^2 = l_o^2 + V_e^2 t_{\parallel\uparrow}^2$, hence, analogically to §7.3.1., simply, $t_{\perp} \simeq (l_o/c)(1 + \beta^2/2)$ using the equation (7).

Also: $(M_1E')^2 = c^2 t_{\perp\leftarrow}^2(M_1E') = (M_1H)^2 + (HE')^2 = (l_o - y)^2 + (V_e t_{\parallel\downarrow})^2$.

$t_{\parallel\downarrow} = t_{\parallel}(\text{total}) - t_{\parallel\uparrow} = l_o/c + y^2/8l_o c + l_o\beta/c - l_o\beta^2/c$ with equations (8) and (7).

And $t_{\perp\leftarrow} = (1/c)\sqrt{(l_o - y)^2 + V_e^2(l_o/c + y^2/8l_o c + l_o\beta/c - l_o\beta^2)^2} \simeq$ (9).

$(l_o/c)(1 + \beta^2/2 - y/l_o)$ neglecting the terms of the order, higher than 2 (in taking the 3 terms at the root approximation). Consequently,

$$t_{\perp}(\text{total}) = t_{\perp\rightarrow} + t_{\perp\leftarrow} = 2l_o(1 + \beta^2/2)/c - y/c. \qquad (9).$$

§7.3.3.3. So $t_{\parallel}$ (total) increases with y and $t_{\perp}$ decreases with y.

wher the $t_{II\uparrow}$ and $t_{II\downarrow}$ – the times for path OM_2' and $M_2'NE'$ correspondingly. After the simple transformations, we get: $PN = y\cdot(l_o - V_e t_{II\uparrow})/2l_o + V_e t_{II\downarrow} - V_e t_{II\uparrow}$

After the approximation (series Taylor) of the above corrected inverse function with the consecutiv multiplication (in neglecting /at the end/ the terms of higher /than β^2/ orders), one get: $PN \simeq y/2$ (4), where the y must be already proportional to $l_o\beta^2$ - §7.3.2.3.). Let find NE' from the similar triangles $\Delta OM_2'N$ and $\Delta NEE'$:

$NE' = NM_2 \cdot EE'/M_2'P = OM_2' \cdot (V_e t_{II\uparrow} + V_e t_{II\downarrow})/l_o - V_e t_{II\uparrow}$ (where $NM_2' = OM_2'$).

Analogically to the transformations of PN /in obtaining the equation (4)/, we get:

$NE' = OM_2'/l_o \cdot (V_e t_{II\uparrow} + V_e t_{II\downarrow} + V_e^2 t_{II\uparrow}^2/l_o + V_e^2 t_{II\uparrow} t_{II\downarrow}/l_o)$ (5).

From right-angled triangle ΔOM_2P, one has:

$$OM_2' = \sqrt{(OP)^2 + (M_2'P)^2} = \sqrt{(PN)^2 + (l_o - V_e t_{II\uparrow})^2}.$$

With simple calculations (analogically to §7.3.2.1.) in dividing by l_o, approximating the root (Taylor series: taking firstly until the term of second order) and in neglecting (at the end) the terms of higher (than β^2) orders, we obtain (after deviding by c):

$$t_{II\uparrow}(OM_2') = (l_o/c)\cdot(1 - V_e t_{II\uparrow}/l_o + (PN)^2/2l_o^2).$$

Using equation (4), one has: $t_{II\uparrow} = l_o/c - V_e t_{II\uparrow}/c + y^2/8l_o c$ (6),

hence one can find $t_{II\uparrow}$: $t_{II\uparrow} = (8l_o + y^2)/8l_o c + 8l_o V_e$ (4),

and then after approximation (series Taylor) of the above corrected (division and multiplication by $8l_o c$) inverse function with consecutive multiplication (neglecting the higher terms) (analogically to the, justly, above), we get:

$$t_{II\uparrow} = l_o/c - l_o\beta/c + l_o\beta^2/c + y^2/8l_o c \qquad (7)$$

From equation (5), one has the time for NE' light path:

$$t_{NE'\downarrow} = t_{II\uparrow}/l_o \cdot (V_e t_{II\uparrow} + V_e t_{II} + V_e^2 t_{II\uparrow} + V_e^2 t_{II\uparrow} t_{II\downarrow}).$$

This equation permits to calculate the time for $M_2'NE'$ path: $/t_{II\downarrow}(M_2'NE') = t_{II\uparrow} + t_{NE'}/$, where analogically to obtaining the equation (7) from (6), one gets the expression for $t_{II\downarrow}$ with approximation of inverse function, multiplications and simple transformations:

$$t_{II\downarrow} = t_{II\uparrow} + 2t_{II\uparrow}^2 V_e/l_o + 3t_{III\uparrow}^3 V_e^2/l_o^2.$$

So $t_{II}(\text{total}) = t_{II\uparrow} + t_{II\downarrow} = 2t_{II\uparrow} + 2t_{II\uparrow}^2 V_e/l_o + 3t_{II\uparrow}^3 V_e^2/l_o^2$ and using the equation (7), taking even one term from $t_{II\uparrow}^3$, making the simple transformations and neglecting the terms of higher orders, we get: $t_{II} \simeq 2l_o/c + y^2/4l_o c$ (8)

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With help of the right-angled triangles ΔOM_1R and $\Delta HM_1E'$, one has:

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Also: $(M_1E')^2 = c^2 t_{\perp\leftarrow}(M_1E') = (M_1S)^2 + (HE')^2 = (l_o - y)^2 + (V_e t_{\perp\leftarrow})^2$.

Analogically: $t_{\perp\leftarrow} = l_o/c\,(1 + \beta^2/2) - y/c\,(1 + \beta^2/2)$.

Then, $t_\perp(\text{total}) = t_{\perp\rightarrow} + t_{\perp\leftarrow} = 2l_o/c\,(1 + \beta^2/2) - y/c\,(1 + \beta^2/2)$ (9).

§7.3.3.3. So t_{II} (total) increases with y and $t_\perp$ decreases with y.

Let find again the y value when their difference is zero $/\Delta(t_\perp - t_{II}) = 0/$:

Easily with equations (8) and (9), we get the second order equation for y:

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Henc : $y^2 + 4l_0 y - 4l_0^2\beta^2 = 0$ (10) and $y = l_0\beta^2$!, coinciding perf ctly with similar calculations for Fig.1A, confirming well the validity of these long calculations.

7.4. Clearest Utopy of Michelson's interferometer measurements.

Now we are ready to realize the (yet) most grav experimental error in the science history. Let realize the formation of the interference pattern in such interferometer. It is not formed by the difference of the light paths due to the differences in the Earth velocities but by the virtual images M_{1i} and M_{2i} in the M_2 mirror where these "virtual images... will be placed side by side and we obtain a system of parallel fringes" /10/ and the light path differences of the $\perp$ and II directions (to Earth movement) makes only the modulation, redistribution of such pattern (Fig.2).

Let see the shift of any particular virtual maximum at the increasing of th optic path in the telescope arm ("M_2"), corresponding to the $\perp$ path at the configuration of Fig.1A. It can be done with the increasing of the optical density, in putting some plexiglass at pathway "M_2" (as at phase fluorometer calibration) or due to the delaying influence of the Earth movement in observing the interference closer to point O. In such case, the path difference between the virtual sources ($M_{2i}A$) will increase. And the difference ($M_{2i}A$), that should be constant to correspond to the maximum must correspond to the pattern, situated already more on the left: at x_2. But at the new, more left, x_2 observation point, the difference between the $\perp$ and II pathways increases automatically according to the equation (2), it means the real maximum will be righter, at some point x_3. So the interferometer is clearly desensitized, because at the shifting of the interference pattern there is the automatic appearance of the additional COMPENSATING (partly neutralizing), always opposite shift due to the dependence of the shift value $/\Delta(\perp - \mathrm{II})/$ on the observation point according to equation (2). The situation is similar at the geometric configuration, corresponding to Fig.1B. So Michelson apriori could not have the corresponding shift with his measurements and Einstein took the very clear false basis for his postulate N°1. Consequently, it is clear definitive irreversible end of the Odyssey with very imaginative Theory of Relativity of Albert Einstein, previous N°1 in the World Science.

7.5. Spectacular experimental, 70 years old, confirmation (already) of author's conclusions.

But such "automatic" difference between the $\perp$ and II paths along the observation line OM_1 (Fig.1) must lead to the fringes with the different width. Evidently, at the lowest x values, the x_3 is more left from x_1, than at higher x (Fig.2A).

Evidently, the regular interference (from virtual sources) observable pattern changes (shift to the left) stronger at the lowest x, with the shift decrease at x increase (Figs.1A and 2A) that clearly must lead to the decrease of the fringe width with the x increase until $x = l_0\beta^2$. Moreover, my calculations (§7.2.–7.4.) prove also that, at $x = l_0\beta^2$, the picture will be relatively more symmetrical than elsewhere because the path

origin underlined parts are correct

$2l_o/c\cdot(1 + \beta^2/2) - y/c\cdot(1 + \beta^2/2) - 2l_o/c - y^2/4l_oc = 0$ (10).

Hence: $y^2 - 4l_oy + 4l_o^2\beta^2 = 0$ and $y = l_o\beta^2$!, coinciding perfectly with similar calculations for Fig.1A, confirming well the validity of these long calculations.

7.4. Clearest Utopy of Michelson's interferometer measurements.

Now we are ready to realize the (yet) most grave exp rimental error in the science history. Let realize the formation of the interference pattern in such interferometer. It is not formed by the difference of the light paths due to the differences in the Earth velocities but by the virtual images M_{1i} and M_{2i} in the M_2 mirror where these "virtual images... will be placed side by side and we obtain a system of parallel fringes" /10/ and the light path differences of the ⊥ and II directions (to Earth movement) makes only the modulation, redistribution of such pattern (Fig.2).

Let see the shift of any particular virtual maximum at the increasing of the optic path in the telescope arm ("M_2"), corresponding to the ⊥ path at the configuration of Fig.1A. It can be done with the increasing of the optical density, in putting some plexiglass at pathway "M_2" (as at phase fluorometer calibration) or due to the delaying influence of the Earth movement in observing the interference closer to point O. In such case, the path difference between the virtual sources (M_{2i}A) will increase. And the difference (M_{2i}A), that should be constant to correspond to the maximum must correspond to the pattern, situated already more on the left: at x_2. But at the new, more left, x_2 observation point, the difference between the ⊥ and II pathways increases automatically according to the equation (2), it means the real maximum will be righter, at some point x_3. So the interferometer is clearly desensitized, because at the shifting of the interference pattern there is the automatic appearance of the additional COMPENSATING (partly neutralizing), always opposite shift due to the dependence of the shift value /Δ(⊥−II)/ on the observation point according to equation (2). The situation is similar at the geometric configuration, corresponding to Fig.1B. So Michelson apriori could not have the corresponding shift with his measurements and Einstein took the very clear false basis for his postulate N°1. Consequently, it is clear definitive irreversible end of the Odyssey with very imaginative Theory of Relativity of Albert Einstein, previous N°1 in the World Science.

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Evidently, the regular interference (from virtual sources) observable pattern changes (shift to the left) stronger at the lowest x, with the shift decrease at x increase (Figs.1A and 2A) that clearly must lead to the decrease of the fringe width with the x increase until $x = l_o\beta^2$. M reover, my calculations (§7.2.–7.4.) prove also that, at $x = l_o\beta^2$, the picture will be relatively more symmetrical than elsewhere because the path

and 50-11). As res : also: original line 50-40 "car at pag 51 (becoming 51-1).

c- light velocity value. $\beta = V_e/c$. Length (l_o) of th "shoulder" OM_1 = 32m; S- light source, M_{2i} and M_{1i}- virtual images of the light source in M_2 ; $M_{2i}l$ and $M_{1i}l$ are the distances to any point l at the observable line OM' in the creation of the interf rence pattern with help of M_{1i} and M_{2i} ; AM_{2i}- interferential path difference; G- semi-transparent glass plate; T- observing telescope; M_1 and M_2- mirrors. A. OM_2O'- total light path in perpendicular ($\perp$) to the V_e direction, wherein the light "meets", at the displaced O observation point (becoming point O' due to Earth movement), the beam separation point, the parallel beam. M_1'- new mirror position after Earth displacement (OM'_1 light trajectory). Such M_1' site is varied at light arrival to fixed point M_2 or ANY point M but for commodity, I do not draw 2nd site of M_1 and calculations are the same anyway. $OM_1'O'$- total light path in parallel ($\parallel$) direction until <u>the same</u> point O'. E- is arbitary observation point (at distance x of order of $l_o\beta$ from O'). $OM_2'E$ and OM'_1E are the total $\perp$ and $\parallel$ light paths until point E. $OM_2 = M_2O'$, $OM'_2 = M'_2E$, $M_2P' \perp OM_1$ and $M'_2P'' \perp OM_1$. B. Device position after its rotation couner-clockwise, through 90°. M_2'- new M_2 position due to Earth movement. Observation at any point E' /distance y from O (order $l_o\beta$, in reality order $\sim l_o\beta^2$ as the x value- 3.3.2.)/. $OM_2'NE'$- total light path in parallel direction ($OM'_2 = M_2'N$). M'_2P is perpendicular. OM_1E'- path in the $\perp$ direction. EE' $\perp$ OE.(E)H and H(E')- positions of E at the moment when the light arrives to M'_2 and E' (due to Earth movement).

Note, that: $V_e \cdot t_{\parallel} \approx V_e \cdot t_{\perp} \approx V_e \cdot l_o/c \approx L_o \cdot \beta$.

Fig.2.A. Evident desensitization of the Michelson-Miller Interferometer. Due to the automatic difference between the $\perp$ and $\parallel$ light paths, the registered shift of the interference pattern is <u>much less</u> than it were to be. M_{1i} and M_{2i}- virtual coherent images of the light source in M_2 mirror (M_{1i}- is the image due to path at the M_1 mirror directions that is /as secondary/ <u>visible</u> in the M_2 mirror with help of the focused apropriately telescope T). Maximum (Max) N°1 is any particular interference maximum that would be visible if there is no special obstacles. Max N°2 would be the new position (because of the shift) of Max N°1 due to the increase of the optical path of the "M_2 path" /as the pathway with the plexiglass (with increased optical density) on the pathway as at the phase fluorometer calibration or the delaying influence of the Earth movement/. Max N°3 is the real position (very decreased shift) of Max N°1 because of the above influence: <u>real</u> Michelson interferometer measurements due to the superposition of the permanent difference between the both pathways (on interference pattern of the M_{1i} and M_{2i} virtual coherent sources), which, <u>itself, depends on the NEW position of the maximum shift</u> (VARIATION with x and y- Fig.1A,B). Situation (here), corresponding to the configuration of Fig.1A. B. Evident Hypersensitization of the Michelson-Miller interferometer. This time the virtual image M_{2i} is adjusted (more difficultly) to be farer from the M_2 mirror! One sees equally (to Fig.2A) that the shift in X_2 (of the original X_1 maximum) <u>increases</u> (this time) automatically the measured X_3 distance. Configuration, here, of Fig.1B.

Fig.3. The exciting proof of the absence of the light propagation between Universes

(UV) and consequently of the nature of the electric field and the falsen ss of Theory of relativity consequence: $E = mc^2$. The cosmic rays of particles with the highest energies pass sole without the imperatively accompanying light (electromagnetic waves) (??!) from the very precise (relatively large) sky regions. The light cannot pass between Universes in the vacuum without neutrinos (υ) and antineutrinos ($\bar{\upsilon}$) and one does not see the Universes apriori without special neutrino telescope (CR- cosmic rays).

Fig.4. The cause of the obligatory eccentricity of all orbites of Solar Systems. (The illustrated case is for the interior orbit, like the Mercury one). After the explosion of Supernova Binary, that rotated on the larger (here) orbit, its fragment (as Mercure) must rotate on the orbit that is parallel to that of Binary. Consequently, from the direction of the force of the gravitational attraction (F) (that is angular, this time, relatively the new orbit plane) to Sun, there is the creation of its vertical component (F_V), that returns the fragment towards the plane of the ancient orbit of the Binary. (F_C- centripetal force).

Fig.5. Mechanism of the process of the Solar Cycles. The dense interior core (nucleus) of Sun makes the asymmetric precession (with "Greenwich" meridian) with the 4 periods of the notation of the superposition around the rotational axis of the exterior rest ("envelope") of Sun (N- its North pole). The projection of the magnetic momentum of the nucleus on the solar surface makes the circle with the period of ~80 years, composed of the 8 periods of the 10–11 years, of the 4 periods of 20–22 years and of the 2 periods of ~40 years! (The numbers of the solar cycles are near the corresponding part of the cycle).

Important Supplement for Research- According to Law.

Acording to Law /for instance, Art.52(3) of Convention of European Patent Office (EPO)/: "The provisions of paragraph 2 (as nonpatentability of discoveries and scientific theories AS SUCH) shall exclude patentability of the subject-matter or activities reffered to in that provision only (ONLY) to the extent to which a European patent application... relates to such .. suject-matter or activities AS SUCH (it means without their practical applications)". To see also the Accord between a number of Offices making the International Search (as EPO, of USA, of Russia, of Austria, of Sweden, of Japan) and World International Patent Organisation in "PCT Gazette" 56/1997 (Appendix B): "are not excluded from research (PCT) or examination (PCT): all objects that are submitted to the research or examination according to the national procedure". Very clearly, as well in "Guidelines for Examination in European Patent Office"- §CIV-2.2. .

The direct stipulation is absolutely EQUIVALENT (since secondary school since 12 years since "their" Euclide) to the stipulation, opposite to the inverse one: "If the European Patent Application concerns the subject-matters (as the discoveries and scientific theories) with their applications (= "not as such"), they are patentable ONLY in this case"!

So one stipulates clearly according to DIRECT Law /stipulation opposite to the inverse